

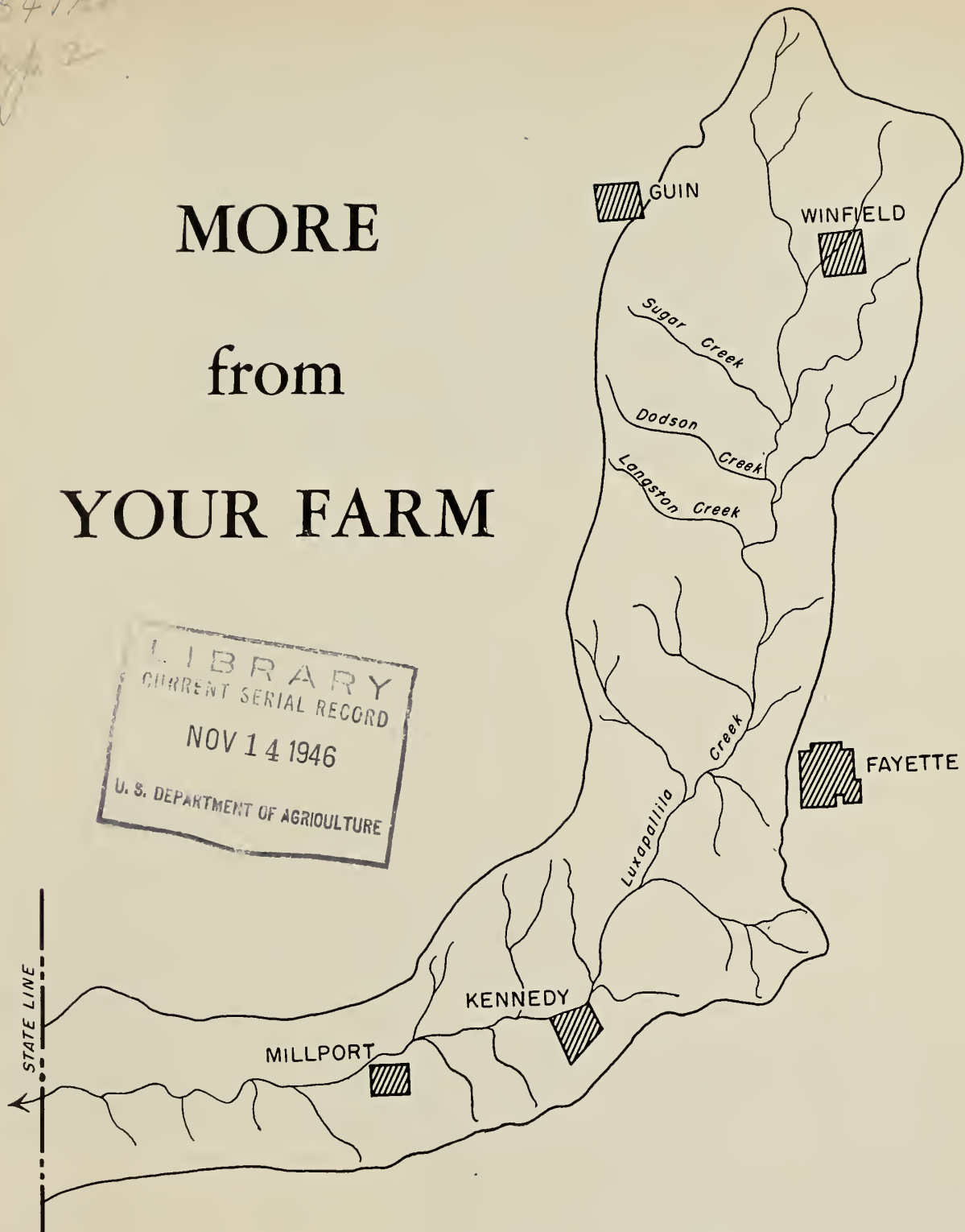
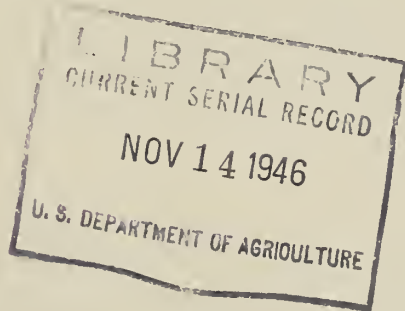
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1  
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Page 2

# MORE from YOUR FARM



## A Guide to Soil Conservation Farming

based on a survey of the land in the Luxapallila Creek Watershed, Alabama

UNITED STATES DEPARTMENT OF AGRICULTURE  
Soil Conservation Service

## Statement by the District Supervisors

If water from your land drains into Luxapallila Creek you will want to read this booklet. It is about your land. It tells about the different kinds of land we have and how to handle each to prevent the soil from washing.

We farmers organized the Tombigbee-Warrior Soil Conservation District so that we could work together in fighting erosion. We asked for and received the help of the Soil Conservation Service and other agricultural agencies. The survey that tells about our land was a part of that help. Men who have had experience in soil management are also available to help farmers who want to protect and improve their soils.

Our land needs our attention. If we only look around us we can see that the land cannot stand up under continuous row crop farming. We can improve our soil and make more money at the same time if we go at it in the right way. We will need to grow more legumes and fewer row crops. We will need to market the feeds we raise through livestock instead of selling the crops for cash. By tying down the soil on the slopes and ditch banks we can help to prevent the filling of the Luxapallila canal that is causing so much trouble in the lower part of the area.

What this publication tells about managing our soil is based on results obtained by the State experiment station and Soil Conservation Service experiment stations. Leading farmers who have followed soil conservation methods and other people who know soil conservation have also contributed their experiences. The recommendations given apply to all the district as well as the Luxapallila watershed.

The district supervisors suggest that every farmer ask for help to plan conservation on his farm. You may request this from the supervisors or at the work unit office in each county. Use your survey map to plan the changes you need.

F. H. HARBOR

*Chairman, Board of Supervisors*

*Tombigbee-Warrior Soil Conservation District*

*Route 1, Detroit, Ala.*

*July 1946*



# IS THIS YOUR FARM?



You can double your present income from your farm. According to a survey of your area and results farmers are getting by conservation farming, the average farm in the Luxapallila watershed can make \$1,300 more each year at present prices.

If you will put every acre to work doing what it is best suited to do and add enough livestock, this increased income is within your reach.

For 100 years the land draining into Luxapallila creek has been used for growing cotton and corn. Farmers who grew row crops year after year saw their soils washing away and yields dropping. Many farmers found they could not make a living on the eroded land and left it idle. Yet, all of this idle land can produce some income.



*Land in your watershed has been growing cotton for 100 years.*

*Some of the 21,397 acres of idle land in the Luxapallila Creek watershed. If you have an average farm, 12 percent of it is idle.*







*Most of your sloping land has lost from one-fourth to three-fourths of the fertile topsoil.*

*Soils washed from gullies are also contributing tons of material to the filling of stream channels and drainage ditches and to covering good land in the stream bottoms.*



*Is this your pasture? It is practically ruined by sand that has washed in from gullies in the upland.*

*Soil, sand, and gravel from your farm filled this channel of the Luxapallila Creek.*







*When you follow row crops with small grain and hay, you save soil and get higher yields. You can grow more pounds or bushels on fewer acres. Rotations plus the terraces or other practices needed are not the same for all land. On pages 8 to 12 you can read about the different kinds of land and the rotations that work best on each.*

Some of your neighbors have doubled or tripled their incomes. Here is how they have done it:

They turn under winter legumes to make the soil hold more water. This leaves less to run off and cause erosion. They also save all straw, stubble, manure, and other organic matter and work them into the soil.

In your woodland the leaves fall each year and eventually rot and become a part of the soil. A similar thing happens in pastures, where

you don't graze them to the ground. But on cropland you must put organic matter into the soil. Growing row crops on the land year after year does not allow much time to add organic matter. And the continued stirring of the soil during cultivation keeps the organic matter used up.

Your neighbors, who are practicing conservation farming, are rotating crops. Here is how it works: One year you grow corn or cotton. The next year you plant small grain. You follow that with a hay crop. Now you are ready to go back to corn or cotton again. This rotation needs 3 years to complete. If you had three fields about the same size you would have a field in corn, one in small grain, and one in hay every year. This is only one example. There are many kinds of rotations that will fit different kinds of land and different kinds of farming.

By following crop rotations your farm will furnish pasture, grain, and hay for more milk cows, beef cattle, hogs, and chickens. Here is what Monroe Stough of Fayette County has done. He increased his milk cows from 2 cows to 7 after establishing crop rotations, hay, and pasture. By following a crop rotation using crota-laria his corn yield went up from 8 bushels per acre in 1940 to 30 bushels in 1945. Before starting conservation farming he produced 7 bales of cotton from 12 acres. He now produces 8½ bales on 8 acres.



*The grain and hay grown in rotation can be turned into cash by livestock.*





*You can build terraces with your equipment. But they must be laid out by someone who is experienced at the job.*



*This kudzu meadow is in a natural draw. It carries water from terrace ends to a natural drainageway. It also provides feed for livestock. The picture was taken on the M. J. Stough farm near Fayette, Ala.*

*Sericea can also be used for terrace outlets.  
(Courtesy Progressive Farmer)*

Some practices such as contouring and terracing help the soil absorb more water. They hold the water on the slope longer and allow it more time to soak into the ground.

Naturally there is a limit to the amount of water the soil can hold. During heavy rains some water must flow from the fields down to the streams. If you are to stop erosion you must plan a system that will carry the water off slowly and without damage to your land.

In general, vegetation protects the land best. In woodlands, pastures, and hay fields we do not need to worry about soil losses unless we abuse these crops so much that they fail to make good ground cover.

If your terraces are built right they control the water as it flows down the slope and carry it slowly from the field. Terraces should be large enough to permit easy farming on both the ridge and channel. They must be big enough to carry the heavy rains that do most damage. They should empty into outlets or on pastures where the water can flow downhill on protective vegetation.

You will probably need some technical assistance in planning the terrace system on your farm. This assistance may be had through the soil conservation district.







The edges of your fields seldom produce a crop. Usually they start eroding. Plant these edges to sericea or kudzu. Sericea or kudzu field borders make good turn rows. They may also be cut for hay. And they give food and shelter to birds, rabbits, and other wildlife.

*Erosion down the edge of a field can be prevented with a border of sericea lespedeza. Besides preventing erosion and keeping down weeds, sericea makes hay and provides cover for birds and other wildlife.*



*Stream banks protected by kudzu on the Otis Cargill farm. Material that filled the creek came from banks such as this before they were stabilized.*

*Road bank stabilized with kudzu on the J. W. Rasberry farm, near Fayette, Ala.*



There are six classes of land in your watershed. Classes I, II, and III are suitable for regular cultivation. They are divided according to the kinds of practices they need. Some need practices to control erosion. Others may need to be drained or need the fertility built up. Class IV can be used for very limited cultivation only. Classes V and VII are suitable only for trees,

grass, or legumes.

Each of these classes of land is shown by a different color on the conservation-survey map. You are not apt to find all six on your farm. You may find two or three, however, in one field.

What kind of land do you have? If you are to get the best returns from it you will need to use each kind for what it is best suited.

## LAND SUITABLE FOR CULTIVATION

### Class I Land

*Level, well drained, and productive  
(colored light green on your map)*



If you are lucky enough to have any level, well-drained bottom land on your farm you have what is known as class I land. There is not much of it in your area. It is the new land that has washed in along the small draws. It is not damaged by overflows and is fairly fertile.

Class I land may be used for corn, small grain, and hay. Corn interplanted with cro-talaria will keep up the organic-matter content.

A rotation of corn, 1 or 2 years, followed by oats with lespedeza to be carried over for a hay crop is a good system to use on class I land.

This land needs lime. Use 1 ton per acre every 5 years. Use fertilizer also, the kind and quantity depending on the crop.

There are only 3,285 acres of class I land in the entire Luxapallila Creek watershed. This is a little less than 2 percent of the area.



### Class II Land

*Gently Sloping  
(colored yellow on your map)*

You may have some land that is gently sloping and not too badly eroded. You can farm this land if you use terraces, protected waterways, contour farming, crop rotations, and win-

ter cover crops. It also needs fertilizer and limé. This is class II land.

This land is the gently sloping upland, not over 6-foot fall in 100 feet. Most of it takes



water easily and is easy to work. But some of it is heavy and takes water more slowly.

You can farm class II land safely by changing the crops often enough and building a good water-disposal system for carrying off surplus water. Cotton 2 years with a winter cover crop

between, followed by 2 years of small grain and lespedeza, should take care of most class II land. A 2-year rotation of cotton or corn followed by small grain and crotalaria is another good rotation for this land.



**Class III Land**  
*Rolling, subject to erosion*  
*(colored red on your map)*

Class III land is sloping, sometimes as much as 10 feet in 100. Most of the soils take water easily. Some, however, are heavy and take water slowly. Class III land will wash badly unless you protect it very carefully. In some places it has already lost all the original topsoil. You can grow crops on it regularly but to do so you must carefully apply the best known soil conservation practices. There is some class III land that is imperfectly drained but makes good cropland if drained.

The surveyors found 38,618 acres of this kind of land in the watershed. This is over one-fifth of the total area.

You can protect class III rolling land by:

*Changing the crops.* Keep the land in close-growing crops at least two-thirds of the time. Grow row crops only one year before changing.

*Building good terraces.* Make the terraces high enough, wide enough, and close enough together to handle the water. You will need an engineer's help for this.

*Strip cropping.* Plant oats, kudzu, or sericea in strips with the row crops in between. Kudzu planted on terraces is fine to help prevent the terraces from breaking over. This practice adds fertility to the soil because the vines spread across the field after the crop is laid by.

*Seeding waterways* to sericea or kudzu.

*Planting the borders* of the field with kudzu or sericea.

*A strip of sericea lespedeza on class III land. The remainder of this field is in cotton.*





# LAND SUITABLE FOR ONLY LIMITED CULTIVATION



Class IV Land  
Rolling, eroded  
(colored blue on your map)

Class IV land is steeper or more severely eroded than class III land. Even though you use the best of practices you cannot prevent class IV land from washing if you cultivate it regularly. It is best to use this land for kudzu or sericea to furnish hay or pasture.

If you do not have enough class I, II, or III land to grow all the crops you need you can cultivate class IV now and then. This plan of growing corn and kudzu is suggested:

1. Plant kudzu, fertilize and cultivate it for a year or two so that it becomes well established. This will take 3 or 4 years.

2. Plow out strips, on the contour, and plant to corn. Make the strips narrow enough so that not more than one-fourth of the field is in corn.

3. Cultivate the corn just enough to give it a start but not enough to kill the kudzu. The kudzu will then cover the ground by the end of the growing season.

4. The next year plow another strip. Continue this each year for 4 years. By that time all of the field will have been in corn. Then start over on the first strip.

By following this plan on a field, you have each year, one-fourth of the field in corn following kudzu, another fourth being reestablished in kudzu following corn, the remaining half in established kudzu that you can use for pasture or cut for hay. You can grow more corn on the strips than formerly grew on the whole field.

Nearly 12 per cent of the land in the Luxapallila Creek watershed is in class IV.

*Corn and kudzu rotation on class IV land. The Alabama Experiment Station at Auburn found that corn yields increased from 3 bushels per acre where no kudzu was grown to 50 bushels per acre following kudzu. The kudzu in the picture to the right grew after the corn was laid by. The corn stalks were cut after the corn was harvested.*





# LAND SUITABLE ONLY FOR TREES OR PASTURE

## Class V Land

*Level, poorly drained  
(colored dark green on your map)*

The poorly drained bottoms are class V land. The subsoils are rather tight. Even when drained with open ditches it does not make good land for crops.

You probably have some of this land that is producing little or no income. By using it for pasture you can increase the number of livestock you can handle and thereby increase your income.

You can grow good pasture on class V land by first draining it and then liming, fertilizing, and seeding. If you cannot drain it you should leave it in trees.

There are 20,133 acres of class V land in the watershed, about 11 per cent of the area.



*An excellent pasture on the E. K. Dodson farm, 5 miles west of Fayette. It is too low, too tight, and too poorly drained to make good cropland.*

## There is Money in Good Pastures

Land is prepared for seeding to pasture by plowing or disking. It is usually better to do this in the fall so that seeding may be done early—before March 1. In all cases the land should be thoroughly prepared before seeding.



*Cow grazing sericea on an upland pasture. This picture was taken on the W. S. Lovelady farm near Double Springs.*

Use 1000 pounds of basic slag or 600 pounds of 16- to 20-percent superphosphate. In addition, use 100 to 200 pounds of muriate of potash and 1 ton of agricultural limestone per acre.

The kind of seed to use depends on the location of your pasture. For bottom-land pasture, where the ground is low and wet, use 10 pounds of Dallis grass, 2 to 3 pounds of white Dutch clover, and 10 pounds of common lespedeza per acre. On upland pastures seed 30 pounds of sericea lespedeza.

Graze a new pasture lightly the first year. It will also pay you to mow the pasture to control bushes and weeds. One way to avoid overgrazing is to have a field of kudzu, sericea, or other supplementary grazing crop. This will handle the stock while the regular pasture rests. You will need to fertilize the pasture each year.





### Class VII Land

*Steep, eroded, gullied land  
(colored brown on your map)*

Some of your land is too steep or eroded to be used for crops. This is class VII land. You should use it for timber or plant it to kudzu. The kudzu can be pastured. There is more class VII land in the watershed than any other kind (79,595 acres or 43 percent). You should make special effort to get it into good use.

Soil from this steep land is washing down and causing damage to good land below it and clogging streams and ditches. It can be held on the hills by trees or kudzu.

A large part of the class VII land is already in timber. There are about 12,000 acres of class VII land either idle or being cultivated. If you have any of this land that is idle you should plant it to trees or kudzu.



*This picture of class VII was taken 6 miles southeast of Winfield. The slope is 17 percent.*

Two ways you can use your steep class VII land:



*Timber, protected from fire and grazing, is holding the soil on the slope.*



*Kudzu holds the soil and may provide some pasture.*



# Your Woodlands are a Money Crop



*A good patch of timber gives you a chance to make extra money during the winter months when other work is lacking. It makes money from land that is not good for anything else.*

If you have a field of class VII (steep, eroded land) on your farm and it is already in timber, the best plan is to leave it that way. In order to make the timber land pay, you must handle it just the same as you would any other crop.

Protect it from fire and grazing. Cut out diseased, dead, crooked, or otherwise low-grade trees and let the good ones have a chance to grow. Plant additional trees in the thin places.



*Fires have killed many trees.*



*Local sawmill near Winfield. Sawlogs bring good money and can be cut during the winter.*

## Wildlife Pays Dividends

Fish and wild birds and animals provide rare sport and the finest food right on your farm. They are also valuable cash products. Besides being valuable for fur, skunks and raccoons destroy insects and rodents. Songbirds also help you by destroying insects and weed seeds.

Conservation farming encourages all kinds of wildlife by providing food and homes for them. Food and homes are usually the only encouragement they need.

The timber on your farm is a good home for many kinds of birds and animals. In cutting your timber to sell it is a good plan to leave a few old den trees for homes for animals. It is also a good plan to fence your woodland to keep out livestock. A border of shrubs where your woodland and cropland meet will provide berries and other food for wildlife. It will also give them cover and nesting sites.

Field borders planted to bicolor or to sericea lespedeza, kudzu, or any other meadow crop are helpful to birds. These crops can take the place of weeds that ordinarily take over the edge of the field.



Gullies, draws, waterways, and terrace outlets planted to kudzu or sericea for erosion control also make good places for wildlife to live. Planting abandoned roads, rocky areas, and odd spots to shrubs will provide more food and cover for wildlife.

Usually you build ponds to supply water for livestock. If you fertilize and stock them with fish they will produce an abundance of good fishing. You can also use your pond for swimming and other recreation. It will pay you to get experienced help in laying out and stocking a pond.



*This 2-acre fish pond is on the J. R. Henry farm, Fayette, Ala. The pool supplies fish and is a good place for swimming. The pond is fertilized every year. The 40-acre watershed is protected by woods.*



## Things you can do to start soil conservation on your farm—

Follow a good rotation:

Use winter and summer legumes to keep up the organic matter in the soil and help control erosion.

Use small grain and winter legumes for winter grazing and protective ground cover.

Grow enough small grain, grain sorghums, and corn to furnish feed for livestock on the farm.

Develop good waterways. Use kudzu and sericea. Later, terraces can be built.

Plant pasture grasses and clover on low, wet land after surface drainage has been established.

Plant the steep land to trees and kudzu.

Plant kudzu or sericea on ditch and stream banks.

Stabilize road banks with kudzu or sericea.

Plant all crops on the contour.

Locate roads and fences on the contour.

Improve your woodlands.

## How the Soil Conservation District can help you—

It can make a survey of your farm.

The local soil conservationist will help you:

Make a complete plan to fit your farm.

Lay out terrace lines.

Lay out water disposal systems such as waterways.

Make surveys for ponds.

Make surveys for drainage work.

Plan your crop rotations.

Manage your woodland.

Establish other practices planned.

The district can furnish some planting stock for woodland and wildlife areas. Application for fish to stock ponds may be made through the soil conservation district.

It gives you the opportunity to cooperate with your neighbors.

By working together, better and more complete solution of erosion problems can be accomplished.

You and all your neighbors in the Luxapallila Creek watershed together can increase your incomes, at present prices, \$3,000,000 a year. You can do this by following the practices described in this publication and by adding enough good livestock.

At present you have 50,150 acres of cropland. You have 1,132 acres of pasture and 112,108 acres of woodland. And you have 21,397 acres that are now idle. If you practice conservation farming you will use all your idle land, you will have more pasture and hay, and you will get larger yields per acre.

Many farmers in the Tombigbee-Warrior Soil Conservation District, which includes your watershed, have proved that you can almost double your per acre yield of cotton. But your great increase in income will be from livestock rather than from cotton. Here is the way you can increase the number of livestock—

	<i>From—</i>	<i>To—</i>
Dairy cows .....	2,464	12,000
Beef cattle .....	900	4,000
Young cattle .....	2,670	10,000
Hogs .....	4,313	15,000
Chickens .....	65,728	200,000

With conservation farming and enough good livestock your agriculture will be permanent as well as prosperous. You will have fewer floods, and less silt in the canal. You will be able to buy more and your added buying power will help the towns of Winfield, Fayette, Kennedy, and Millport. Besides these benefits, the health of all the people in the watershed will be improved.